Remarks

In response to the rejection for anticipation by the newly cited reference, US 6654341 (Chi), the following comments are made.

Chi is concerned with the problem that in the SONET network ring environment, there currently does not exist a ring configuration that allows for spans within a single ring to have different bandwidth or for a different number of lines to exist between nodes. In addition, no current SONET network ring allows for sharing protection lines between different rings. Chi proposes sharing a ring using a single node by using switches at the nodes in place of add/drop multiplexors. Identification and availability information of the shared protection line is distributed among the switches of the SONET rings using K-byte data in the SONET overhead.

The present invention, in contrast, is concerned with a link aggregation router. The Examiner refers to figure 4 of Chi as showing a link aggregation router. However this figure only shows a switch, not a link aggregation router. The passage of col 4 of Chi cited by the Examiner states as follows:

> "Switch 410 is connected to a line card 420 having an aggregator 422 and a plurality of monitor modules 424.sub.1 to 424.sub.n. Aggregator 422 gathers information from monitor modules 424 and passes the information to appropriate switches via monitor modules 424. Each monitor module 424 has a plurality of physical SONET lines 430 that connect to other switches."

Col 4 of Chi goes on to explain the function of the switch as follows:

> "Since switch 410 simultaneously transfers information between a plurality of different SONET lines of information, the present invention allows for two rings to share a switch, or be connected by sharing a switch. For example, as seen in FIG. 5, SONET network ring 500 and SONET network ring 510 are connected by sharing switch 508. Ring 500 includes switches 502, 504, 506, and 508. Ring 510 includes switches 508, 512, 514, and 516. By using a single switch to connect rings, information is

passed over SONET lines at the same rate between rings as is passed within a single ring."

As there is no discussion of link aggregation, nor of link aggregation routing, it is clear that the switch of Chi is not able to do this. The only aggregation described as being carried out by the aggregator 422 is aggregation of monitoring information from multiple monitoring modules 424.

Hence there is no disclosure of the claim feature of a link aggregation router and hence no disclosure of the claim features of a "link aggregation router having at least two ports, a first port connected to a working transmission path, and a second port connected to a shared protection path, such that in failure-free operation both the working transmission path and the shared protection path carry link aggregated traffic simultaneously without duplication of that traffic on the two routes." Hence the rejection for anticipation by Chi is respectfully traversed.

If the Examiner maintains this rejection, it would be appreciated if he could provide more explanation of where in Chi there is any basis for disclosure of link aggregated traffic, or of a link aggregated router.

These terms are explained at page 5 of the specification of the present application as follows:

> "The IEEE has determined that the term "link aggregation" is the generic term for this type of technology, with the IEEE link aggregation standards effort to be called 802.3ad. Link aggregation is a method of grouping physical link segments of the same media type and speed, and treating them as if they were part of a single, logical link segment. In general, link aggregation provides two important benefits: increased performance and increased resilience. Link aggregation provides cost effective incremental bandwidth between two devices, and offers the potential to multiply aggregate bandwidth. The technique also provides automatic, point to point redundancy between two devices (e.g. switch to switch or switch to server). If a link in a trunk fails, the flows mapped

to that link are dynamically reassigned to the remaining links of the aggregated link.. The remapping occurs as soon as the switch learns that an individual link has failed. As a result, link aggregation configurations are extremely resilient and fault tolerant."

If the Examiner is applying a different interpretation of these terms, again further explanation would be appreciated.

For the sake of completeness, non-obviousness will also be discussed. As explained in previous response, optical protection schemes would normally be handled at the link level and thus operate independently of any link aggregation router. Hence there is nothing in Chi which leads towards the unusual step of incorporating a link aggregation router into an optical shared protection scheme as set out in the present claim 1 which specifies a link aggregation router having at least two ports, a first port connected to a working transmission path, and a second port connected to a shared protection path. This has the consequence that there is no longer a need to pre sort the traffic for the optical link into protected and unprotected traffic, as the router is capable of doing this, since it has two ports connected to a working path and a shared protection path respectively. Hence some of the advantages of link aggregation and of shared protection paths can be achieved more efficiently by using the same router for both schemes. There is no suggestion in Chi of this, and no suggestion of using its router to separate traffic between a shared protection path and a working path. Nor is there any hint of the advantages arising. Hence Chi is not relevant to claim 1.

All the other claims have corresponding features or are dependent on such claims, and so these arguments apply to all claims.

All the points raised have been dealt with, all the claims are submitted to be allowable and reconsideration is requested.

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Respectfully submitted,

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